

KENNETH C. BALDWIN

280 Trumbull Street Hartford, CT 06103-3597 Main (860) 275-8200 Fax (860) 275-8299 kbaldwin@rc.com Direct (860) 275-8345

Also admitted in Massachusetts and New York

July 17, 2020

Via Electronic and First Class Mail

Beth Heller, First Selectman Town of Woodbridge Woodbridge Town Hall 11 Meeting House Lane Woodbridge, CT 06525

Re: Submission of Technical Information Concerning a Proposal to Construct a Wireless Telecommunications Facility at 118 Newton Road, Woodbridge, Connecticut

Dear Ms. Heller:

This firm represents Cellco Partnership d/b/a Verizon Wireless ("Cellco"), in its proposal to construct a new wireless telecommunications facility on a 6.01 acre parcel at 118 Newton Road in Woodbridge, Connecticut (the "Property"). (See Site Location Map included in Attachment 1). The Property is owned by Michael Soufrine, Trustee. The proposed telecommunications facility is known as Cellco's "Woodbridge North 2 Facility".

This Technical Report is submitted pursuant to Connecticut General Statutes ("Conn. Gen. Stat.") § 16-50 \underline{l} (g), which establishes local input requirements for the siting of a wireless telecommunications facility under the exclusive jurisdiction of the Connecticut Siting Council (the "Council"). This statutory provision requires the submission of technical information to officials in the municipality where the proposed facility will be located and any municipality within 2,500 feet of the proposed facility location.

Correspondence and/or communications regarding the information contained in this report should be addressed to:

20669996-v1

Beth Heller, First Selectman July 17, 2020 Page 2

> Andrew Candiello Sr. Manager – RE/Regulatory Cellco Partnership d/b/a Verizon Wireless 20 Alexander Drive Wallingford, CT 06492

A copy of all such correspondence or communications should also be sent to Cellco's attorneys:

Kenneth C. Baldwin, Esq. Robinson & Cole LLP 280 Trumbull Street Hartford, CT 06103-3597

Cellco intends to submit an application to the Council for a Certificate of Environmental Compatibility and Public Need ("Certificate") for the construction, maintenance and operation of a wireless telecommunications facility in the western portion of the Property. The Woodbridge North 2 Facility would provide reliable wireless service (coverage) to portions of north-central Woodbridge, in the vicinity of the Property including portions of Routes 63, 67 and 114 in Woodbridge. The Woodbridge North 2 Facility will also enhance coverage to the southeast, replacing coverage previously provided by Cellco's Hamden cell site (Gamma sector), which will be decommissioned later this year. Coverage plots showing Cellco's existing wireless service in the area alone and together with the proposed Woodbridge North 2 Facility in its 700 MHz, 1900 MHz and 2100 MHz frequencies are included in Attachment 2.

Cell Site Information

Cellco proposes to install a 140-foot monopole tower within a 50' x 50' fenced compound and 100' x 100' leased area in the westerly portion of the Property. Cellco would install panel-type antennas and remote radio heads on a platform at the top of the tower, 140 feet above ground level ("AGL"). Cellco's antennas would extend above the top of the tower to a height of 144 feet AGL. Equipment associated with Cellco's antennas, a propane-fueled backup generator, and a propane fuel tank would also be located within the fenced facility compound. Space on the tower and in the facility compound would be made available to other wireless carriers and the Town of Woodbridge for municipal and emergency service purposes, if needed. Access to the Woodbridge North 2 Facility would extend from Soundview Drive along an improved portion of an existing driveway, then along a new gravel driveway extension to the proposed tower site. Utilities would extend from existing utility service on Soundview Drive. Included in Attachment 3 is a set of Project Plans including a tower elevation drawing.

Beth Heller, First Selectman July 17, 2020 Page 3

Connecticut Siting Council Jurisdiction

Municipal jurisdiction over the siting of the proposed telecommunications facility described in this report is pre-empted by provisions of the Public Utilities Environmental Standards Act ("PUESA"), Conn. Gen. Stat. § 16-50g et seq. The PUESA gives exclusive jurisdiction over the location, type and modification of telecommunications towers, to the Council (Conn. Gen. Stat. § 16-50x(a); 16-50i(a)(6)). Accordingly, the telecommunications facility described in this report is exempt from the Town's land use (zoning and inland wetlands) regulations.

Upon receipt of an application, the Council will assign a docket number and, following a completeness review, set the schedule for the docket, including a hearing date. At that time, the Town may choose to become an intervenor or party in the proceeding. Other procedures followed by the Council include serving the applicant and other participants with interrogatories, holding a pre-hearing conference, and conducting a public hearing. The public hearing would, typically be held at a location in the Town1. Following the public hearing, the Council will issue findings of fact, an opinion and a decision and order. Prior to construction, the Council will also require the Applicant to submit a development and management plan ("D&M Plan") which is, in essence, a final site development plan showing the details of the facility incorporating any conditions imposed by the Council. These procedures are also outside the scope of the Town's jurisdiction and are governed by the Connecticut General Statutes, the Regulations of Connecticut State Agencies, and the Council's Rules of Practice. If the Council approves the cell site described in this report, Cellco will submit to the Building Official an application for approval of a local building permit. Under Section 16-50x of the General Statutes, which provides for the exclusive jurisdiction of the Council, the building official must honor the Council's decision.

Municipal Consultation Process

Pursuant to Section 16-50½ of the General Statutes, Town officials are entitled to receive technical information regarding the proposed telecommunications facility at least ninety (90) days prior to the filing of an application with the Council. This Technical Report is provided in accordance with these provisions and includes information on the need for improved reliable wireless service in the area; the location of existing wireless facilities in and around the area; details of the proposed facility; the location of alternative sites considered and rejected; the location of schools and commercial day care facilities in the area and the aesthetic impacts of the

¹ In order to prevent the spread of Coronavirus and to protect the health and safety of the public, the Council's hearing may be held remotely.

Beth Heller, First Selectman July 17, 2020 Page 4

facility on those schools and day care facilities, if any; a description of the site selection process; and a discussion of potential environmental effects associated with the proposed facility.

Not later than sixty (60) days after the initial consultation, the municipality <u>may</u>, in cooperation with Cellco, hold a public information meeting on the facility proposal. If such a meeting is held, the applicant must notify all abutting landowners and publish notice of the meeting in a newspaper of general circulation in the municipality, at least fifteen (15) days prior to the meeting.

Not later than thirty (30) days after the initial consultation meeting, the municipality may present the prospective applicant with alternative sites, including municipal parcels, for its consideration. If not previously considered, these alternatives will be evaluated and discussed in its application to the Council.

Pursuant to Section 16-50*l*(e) of the General Statutes, Cellco must provide a summary of the Town's comments and recommendations, if any, to the Council within fifteen (15) days of the filing of an application.

Need for the Proposed Wireless Facility

The Woodbridge North 2 Facility described in this Technical Report is needed so that Cellco can provide enhanced reliable wireless services (coverage) in north-central portions of Woodbridge, including portions of Routes 63, 67 and 114 and local roads in the vicinity of the Property. The Woodbridge North 2 Facility will also provide coverage to portions of the town currently served by Cellco's Hamden cell site, along West Rock Ridge, which will be decommissioned later this year.

Environmental Effects

In our experience, the primary impact of a wireless facility such as the proposed Woodbridge North 2 Facility is visual. The visual impact of the proposed Woodbridge North 2 Facility tower will vary from place to place around the site location, depending upon factors such as vegetation, topography, distance from the tower, and the location of buildings or other structures (utility infrastructure) in the sight-line of the cell site.

To more fully assess the visual impact of the Woodbridge North 2 Facility, Cellco's consultant, All-Points Technology Corporation ("APT") has prepared a Preliminary Visual Assessment for the proposed tower location. This preliminary visual assessment indicates that predicted year-round visibility associated with the proposed Woodbridge North 2 Facility would

Beth Heller, First Selectman July 17, 2020 Page 5

include approximately 18-acres (less than 1% of the 8,042-acre study area). The majority of the predicted year-round visibility would be in the immediate area around the tower site. (*See* Attachment 4). A more detailed visual assessment, including a seasonal visual assessment and photosimulations of the tower, is being prepared and will be included in Cellco's Certificate application to the Council.

Pursuant to the provisions of Conn. Gen. Stat. § 16-50p(a)(3)(G), new telecommunications facilities must be located at least 250 feet from buildings containing schools (defined in C.G.S. §10-154a) and commercial day care facilities (defined in C.G.S. §19a-77(a)(1)) unless the location selected is acceptable to the Town's chief elected official or the Council finds that the facility will not have a substantial adverse effect on the aesthetics or scenic quality of the neighborhood where the school or commercial day care use is located. The proposed Woodbridge North 2 Facility is not located within 250 feet of any building containing a school or commercial day care facility.

Based on field surveys, Cellco has determined that the construction of the Woodbridge North 2 Facility and it's access driveway will have no direct impact on inland wetlands or watercourses, within or near either of the tower compound. Cellco anticipates that all other physical environmental effects associated with the proposed facility would also be minimal.

Radio Frequency Emissions

The Federal Communications Commission ("FCC") has adopted a standard (the "Standard") for exposure of radio frequency ("RF") emissions from telecommunications base stations like the Woodbridge North 2 Facility. To ensure compliance with the Standard, Cellco has performed a worst-case RF emissions calculation for the proposed facility according to the methodology described in FCC Office of Science and Technology Bulletin No. 65 ("OST Bulletin 65"). This calculation is a conservative, worst-case approximation of RF emissions at the closest accessible point to the antenna (i.e., the base of the tower), and assumes that all antennas are transmitting simultaneously, on all frequencies and all channels, at full power. The worst-case calculated RF emissions level would be 42.38% of the FCC Standard for the proposed 140-foot antenna centerline. (See Attachment 5). Actual RF emissions levels from this facility will be far less than this "worst-case" approximation.

Scenic Natural Historic or Recreational Impacts

To further assess the environmental impacts of the proposed facility, Cellco will be working with its consultant team to prepare a National Environmental Policy Act ("NEPA") Environmental Screening Checklist (the "NEPA Checklist") and other related environmental

Beth Heller, First Selectman July 17, 2020 Page 6

reviews to determine if the facility will have any significant adverse environmental effects. The NEPA Checklist will include information from the Environmental and Geographic Information Center of the Connecticut Department of Energy and Environmental Protection ("DEEP"), the U.S. Fish and Wildlife Service ("USFWS") and the State Historic Preservation Officer ("SHPO"). Copies of the DEEP, USFWS and the SHPO determinations will also be submitted as a part of the Council's Certificate Application.

Site Search Process

Cellco conducted a search for suitable cell site locations in north-central Woodbridge and identified the Property as a site that would satisfy its wireless service objectives in the area. In addition to the proposed location, Cellco identified and investigated six (6) additional alternative parcels in the area. A complete list of alternative parcels investigated is included in <u>Attachment</u> 6.

Tower Sharing

As stated above, Cellco intends to build a tower that is capable of supporting its antennas and those of other wireless telecommunications providers, the surrounding municipalities, and emergency service providers, if a need exists. The provision to share the tower is consistent with the intent of the General Assembly when it adopted Conn. Gen. Stat. § 16-50aa and with Council policy. The availability of space on the proposed tower may reduce, if not eliminate, the need for additional towers in the area for the foreseeable future.

Conclusion

This Technical Report is submitted in accordance with Conn. Gen. Stat. § 16-50½ which requires Cellco to supply the Town with information regarding its proposed Woodbridge North 2 Facility. This report includes information regarding the site selection process, public need, and the potential environmental impacts of the facility. Cellco submits that its proposed Woodbridge North 2 Facility would not have any significant adverse environmental effects. Moreover, Cellco submits that the public need for high quality wireless service, and a competitive framework for providing such service has been determined by the FCC to be in the public interest and that such public need far outweighs any perceived environmental effects of the proposed facility.

Beth Heller, First Selectman July 17, 2020 Page 7

Please contact me if you have any additional questions regarding the proposed facility.

Sincerely,

Kenneth C. Baldwin

Kunie gmu-

KCB/kmd Enclosures Copy to:

> Robert Blythe, Chair, Woodbridge Inland Wetlands Commission Robert Klee, Chair, Woodbridge Town Plan and Zoning Commission Kristine Sullivan, Land Use Analyst and Acting Inland Wetlands Officer Andrew Candiello, Sr. Manager Regulatory/Real Estate Ziad Cheiban, RF Design Engineer Julia Coughlin, Structure Consulting Group Chuck Webberly, Structure Consulting Group



Legend

S

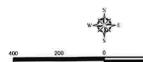
Site

Subject Property

Municipal Boundary

Map Notes: Base Map Source: CT ECO 2019 Imagery Map Scale 1 inch = 400 feet Map Date: April 2020

Approximate Parcel Boundary (CTDEEP GIS)

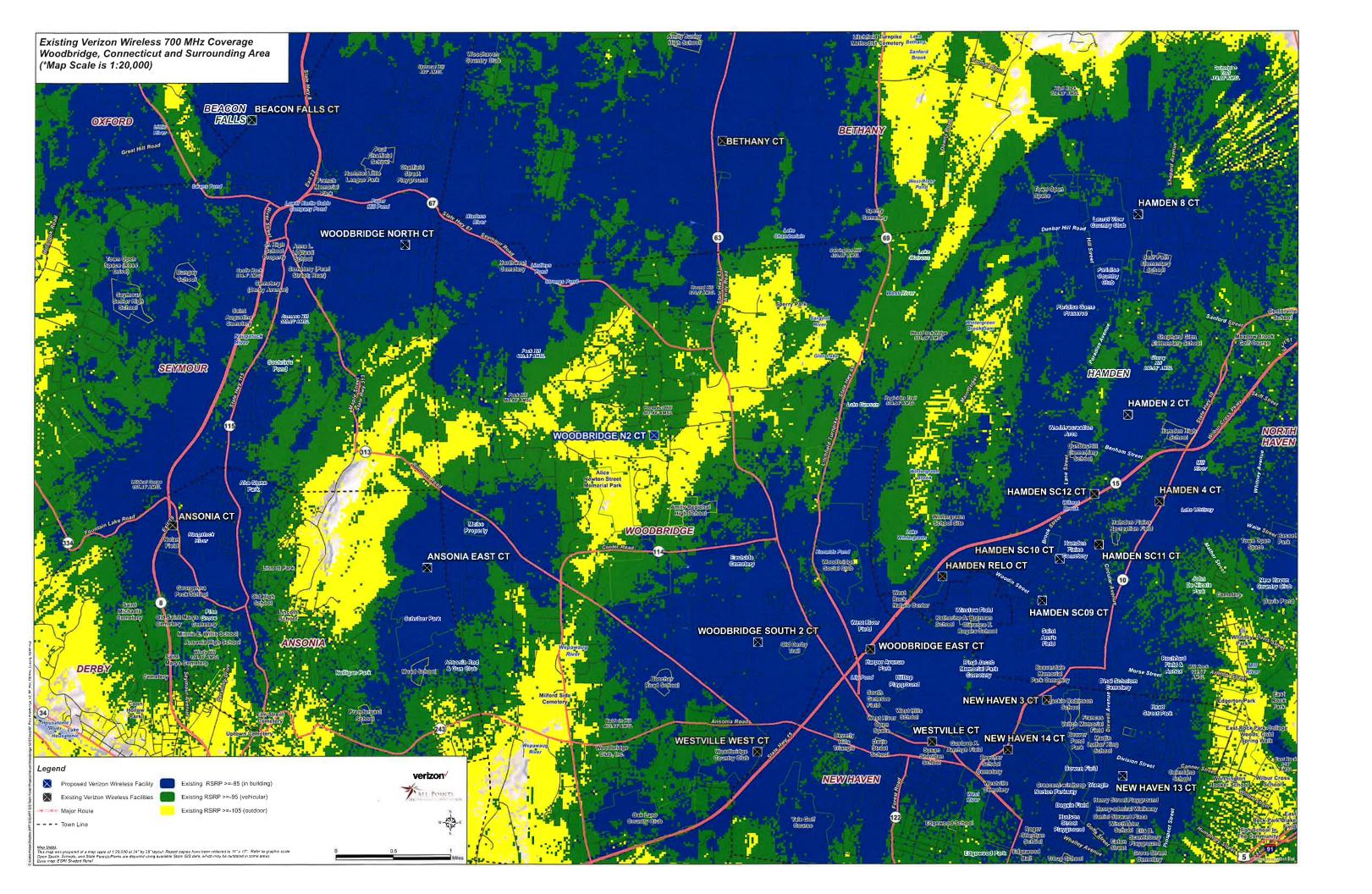


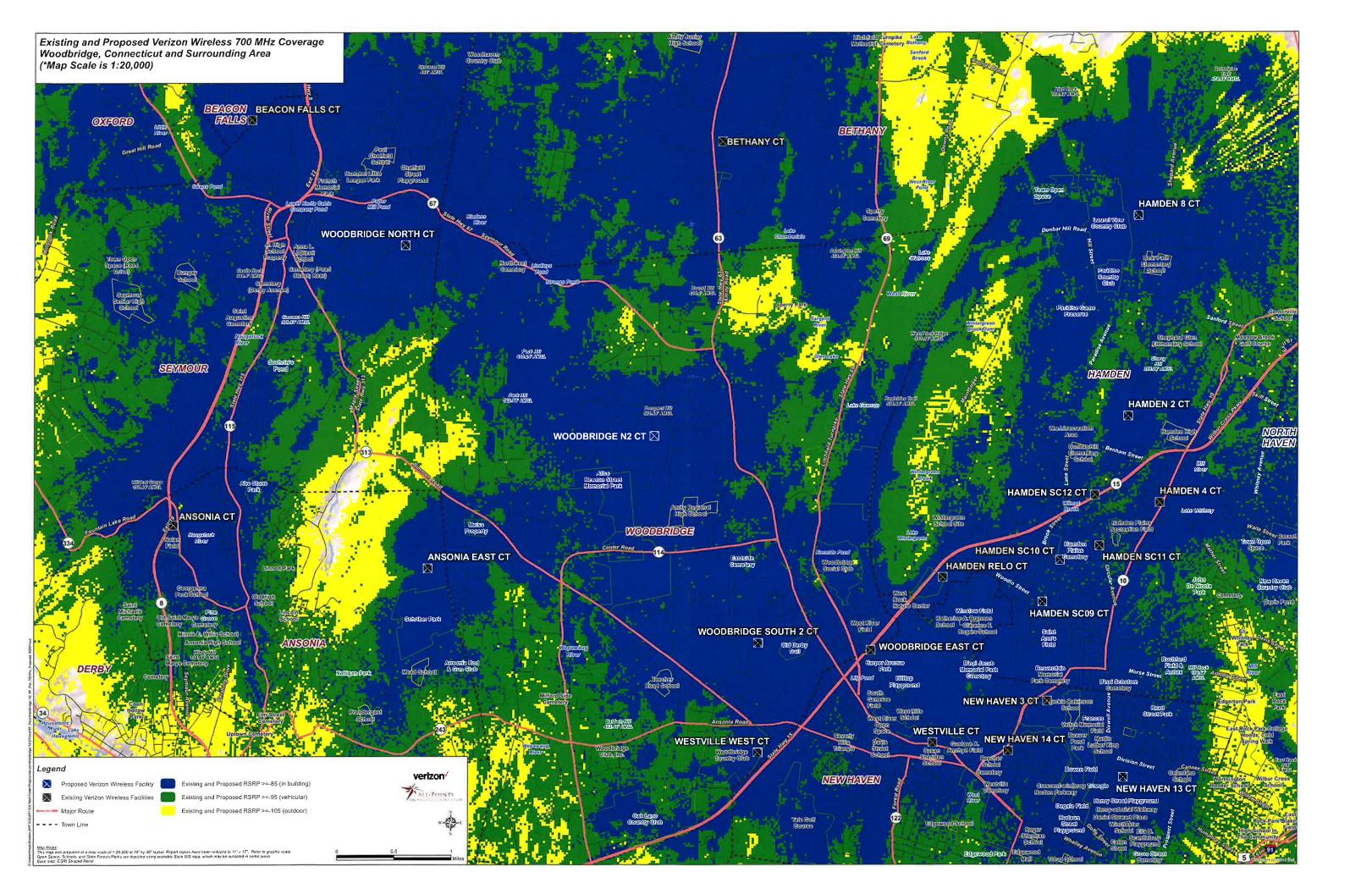
Site Location Map

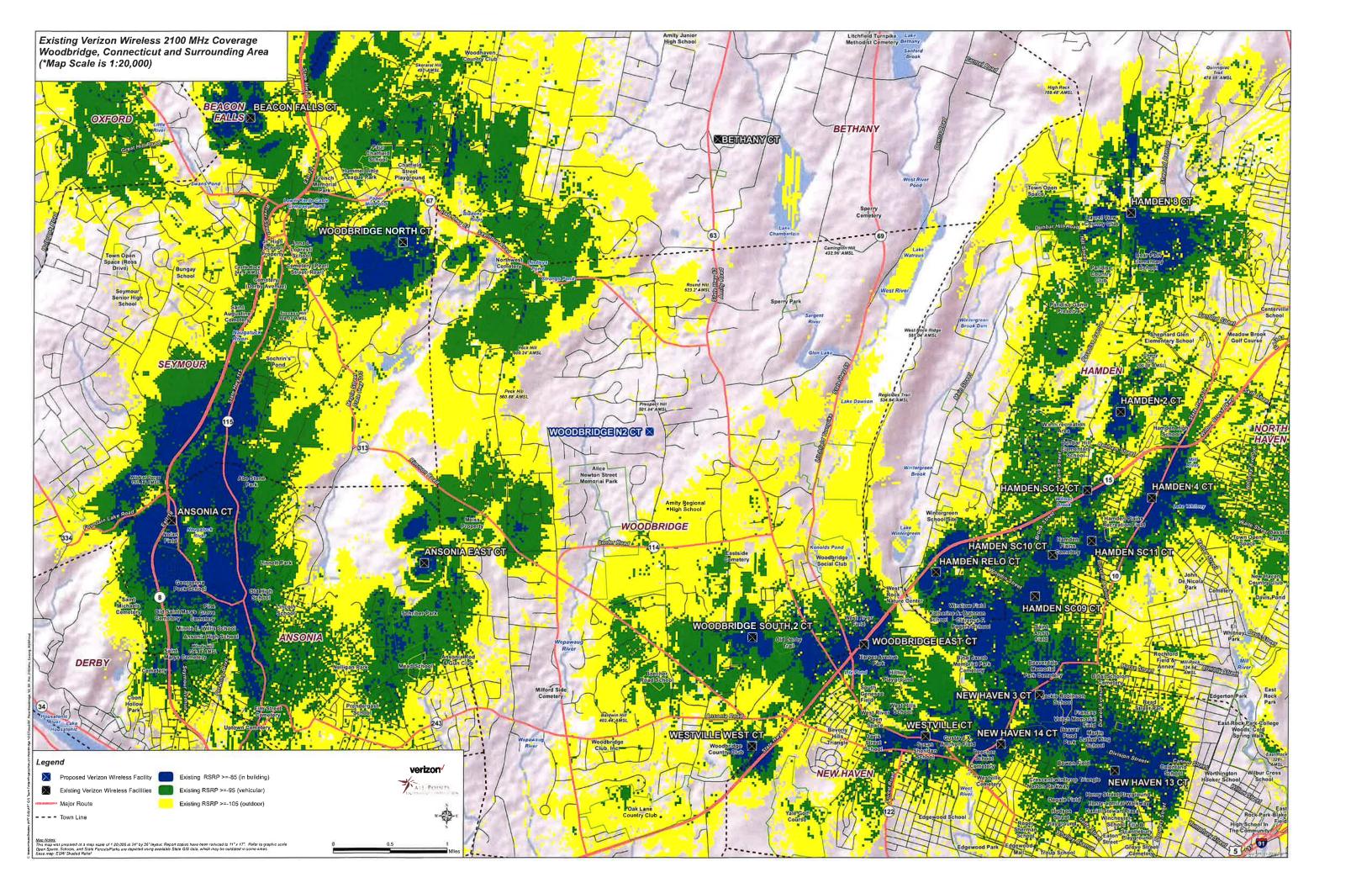
Proposed Wireless Telecommunications Facility Woodbridge N2 CT 118 Newton Road Woodbridge, Connecticut

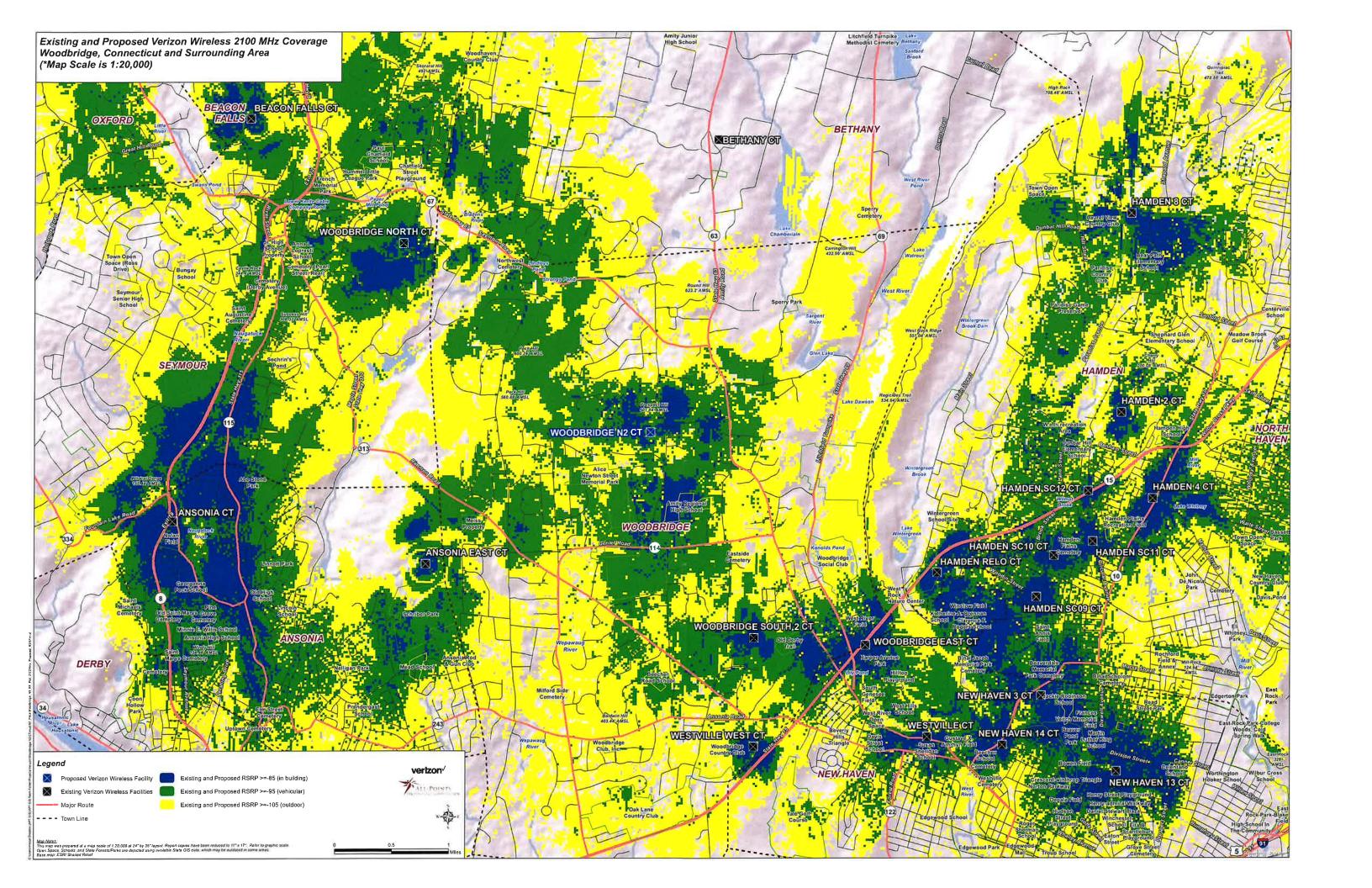
verizon√

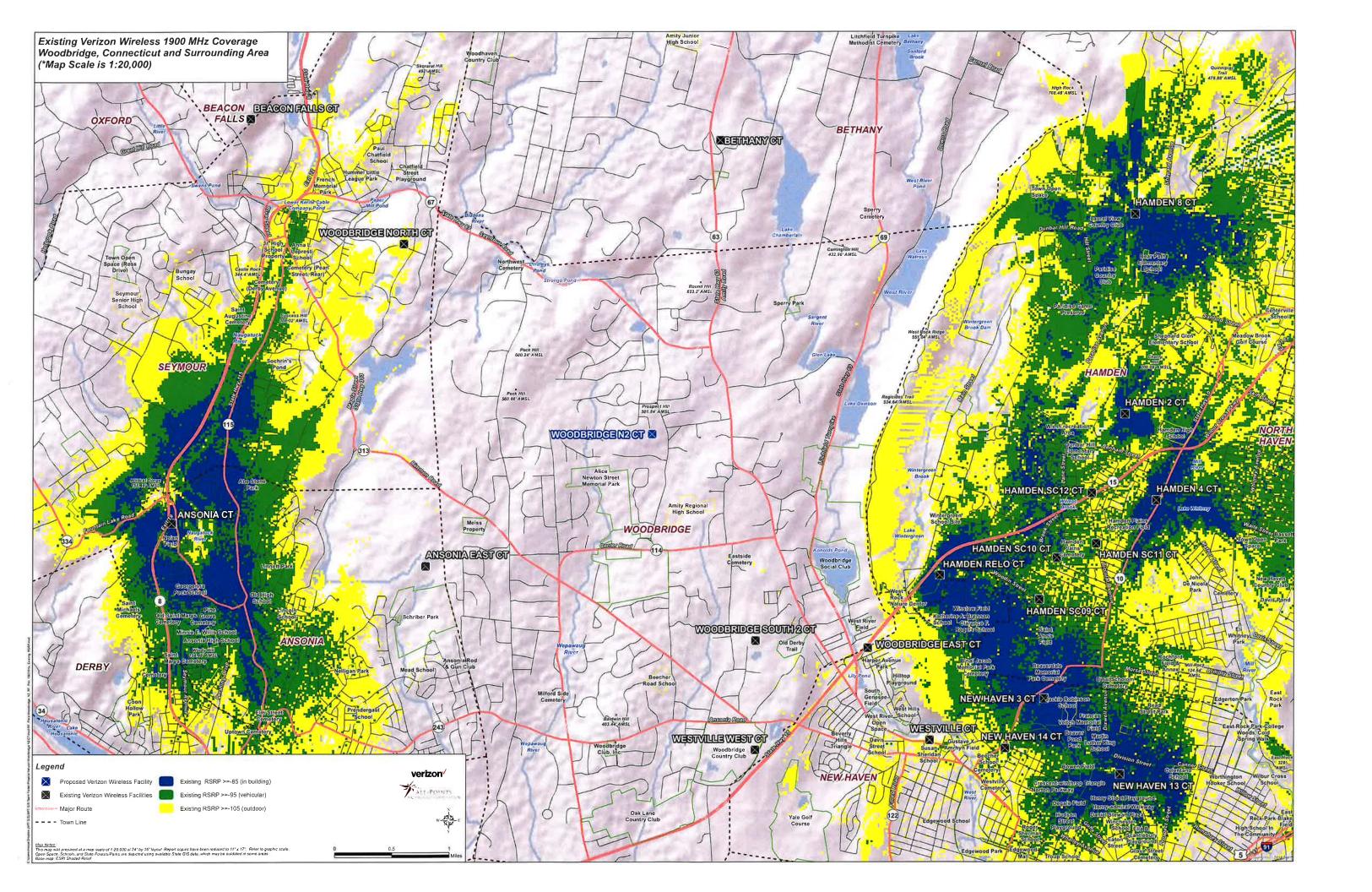


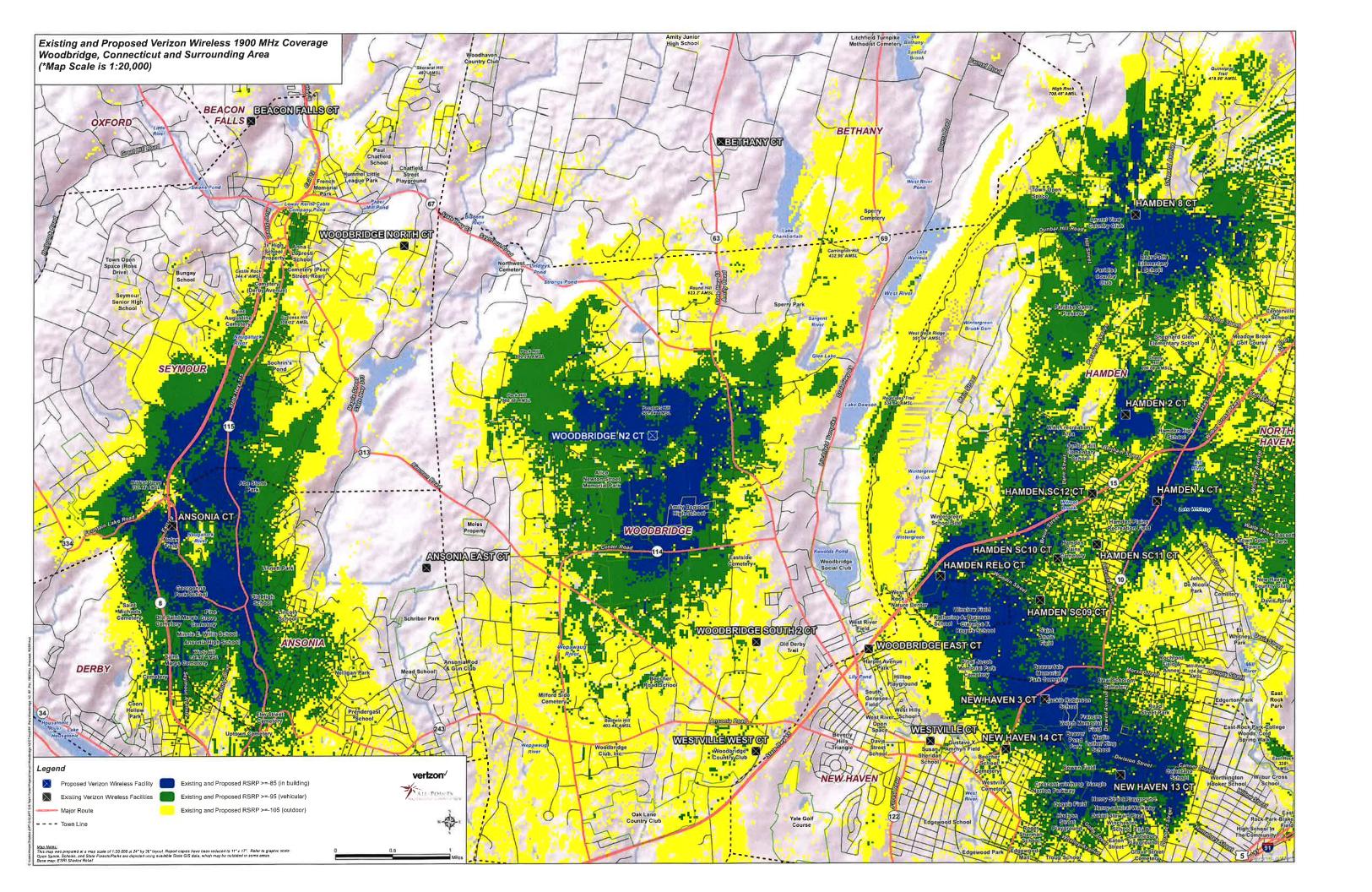












CELLCO PARTNERSHIP



WIRELESS COMMUNICATIONS FACILITY

WOODBRIDGE N2 CT

118 NEWTON ROAD **WOODBRIDGE, CT 06525**



DIRECTIONS TO SITE:

FROM 20 ALEXANDER DR WALLINGFORD, CT 06492 GET ON CT-15 S FROM ALEXANDER DR, CT-68 W AND US-5 N/N COLONY RD

HEAD SOUTHWEST TOWARD ALEXANDER DR TURN RIGHT TOWARD ALEXANDER DR

TURN RIGHT TOWARD ALEXANDER DR TURN RIGHT ONTO ALEXANDER DR

TURN RIGHT ONTO BARNES INDUSTRIAL RD S

TURN LEFT AT THE 1ST CROSS STREET ONTO CT-68 W

TURN RIGHT ONTO US-5 N/N COLONY RD
TURN LEFT TO MERGE ONTO CT-15 S TOWARD NEW HAVEN
FOLLOW CT-15 S TO HARTFORD TURNPIKE IN NORTH HAVEN. TAKE EXIT 63 FROM CT-15 S MERGE ONTO CT-15 S

TAKE EXIT 63 TOWARD CT-22/N HAVEN TAKE CT-22 W TO NEW RD IN HAMDEN

TURN LEFT ONTO HARTFORD TURNPIKE

TURN RIGHT ONTO BISHOP ST., CONTINUE ONTO RIDGE RD

TURN RIGHT ONTO CT-22 W/DAVIS RD, CONTINUE TO FOLLOW CT-22 W TURN RIGHT ONTO NEW RD DESTINATION WILL BE ON THE LEFT

CONSULTANT TEAM

PROJECT ENGINEER

HUDSON DESIGN GROUP, LLC 45 BEECHWOOD DRIVE NORTH ANDOVER, MA 01845 TEL: 1-(978)-557-5553 FAX: 1-(978)-336-5586

MEP ENGINEER

HUDSON DESIGN GROUP, LLC 45 BEECHWOOD DRIVE NORTH ANDOVER, MA 01845 TEL: 1-(978)-557-5553 FAX: 1-(978)-336-5586

PROJECT SUMMARY

SITE NAME: SITE ADDRESS: WOODBRIDGE N2 CT 118 NEWTON ROAD WOODBRIDGE, CT 06525

PROPERTY OWNER:

SANFORD & BETTY SOUFRINE 118 NEWTON ROAD

APPLICANT:

CELLCO PARTNERSHIP d/b/a VERIZON WIRELESS 20 ALEXANDER DRIVE WALLINGFORD, CT 06492

WOODBRIDGE, CT 06525

APPLICANT:

STRUCTURE CONSULTING GROUP 49 BRATTLE STREET

LEGAL/REGULATORY COUNSEL: KENNETH C. BALDWIN ESQ.

ROBINSON + COLE LLP

(860)275-8345

LATITUDE:

N41' 22' 03.10" LONGITUDE: W73° 00' 40.41"

SCOPE OF WORK INFO.

VERIZON WIRELESS IS PROPOSING TO INSTALL THE FOLLOWING IMPROVEMENTS ON PROPOSED TELECOMMUNICATION SITE:

- NEW 50'x50' FENCED COMPOUND WITHIN PROPOSED 100'x100' LEASE AREA. ON EXISTING PARCEL OF LAND.
- NEW PANEL ANTENNAS: (4) ANTENNA PER SECTOR WITH (3) SECTORS, FOR A TOTAL OF (12) ANTENNAS. NEW RRHs: (3) RRHs PER SECTOR WITH (3) SECTORS, FOR A TOTAL OF (9) RRHs
- NEW JUNCTION BOXES: (2) JUNCTION BOXES (OVP) TOTAL.
 ITEMS LISTED ABOVE TO BE MOUNTED ON PROPOSED VERIZON TOWER.
- NEW EQUIPMENT CABINETS: (1) CABINET WITH GENERATOR ON PROPOSED CONCRETE PADS.
- TEMS LISTED ABOVE TO BE INSTALLED WITHIN THE PROPOSED 50'x50' FENCED COMPOUND. NEW POWER AND TELCO SERVICES WILL BE ROUTED UNDERGROUND FROM EXISTING UTILITY POLE TO PROPOSED ELECTRICAL METER AND HOFFMAN BOX ON PROPOSED H-FRAME.
- FINAL UTILITY ROUTING TO BE DETERMINED/VERIFIED BY UTILITY COMPANIES.

TITLE SHEET

C-2 SITE PLAN

A-1

SHEET INDEX DESCRIPTION C-1 ABUTTERS PLAN COMPOUND PLAN A-2 ELEVATION A-3 EQUIPMENT CONCRETE PAD AND DETAILS verizon

PREPARED FOR: CELLCO PARTNERSHIP D.B.





CHECKED BY:

APPROVED BY:

SUBMITTALS DATE DESCRIPTION

SITE NAME: WOODBRIDGE N2 CT

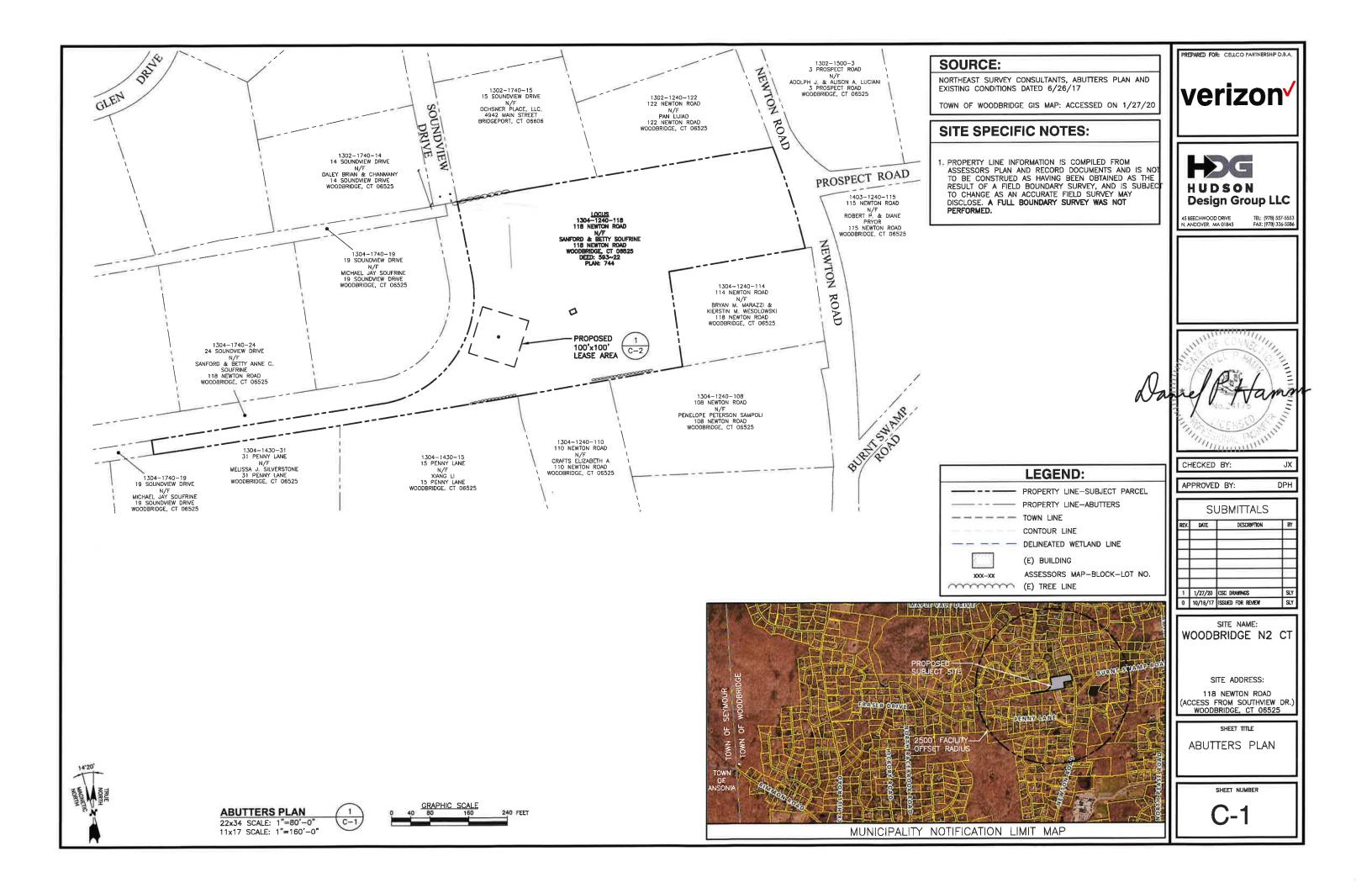
1/27/20 CSC DRAWINGS 0 10/16/17 ISSUED FOR REVIEW

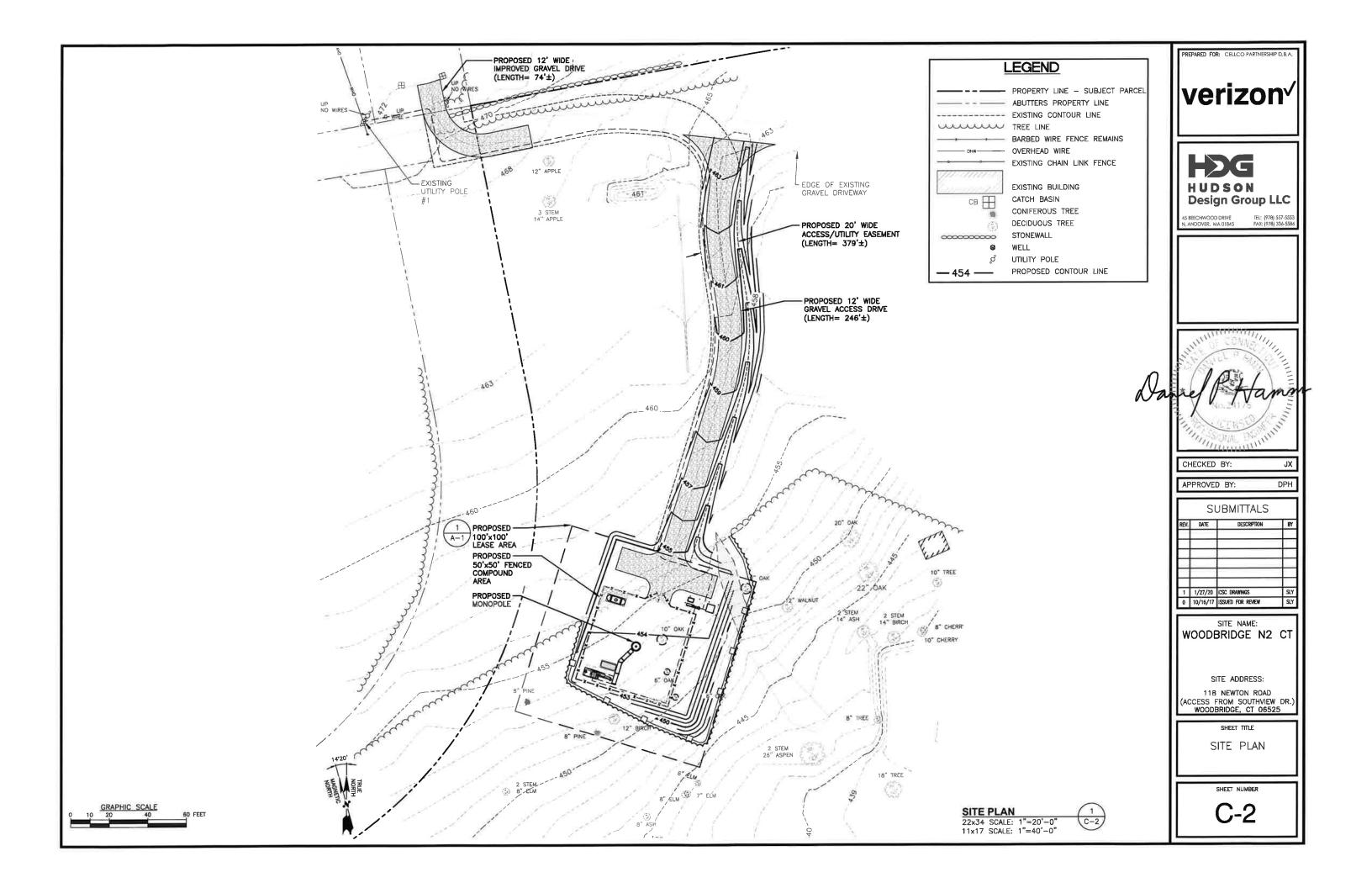
SITE ADDRESS:

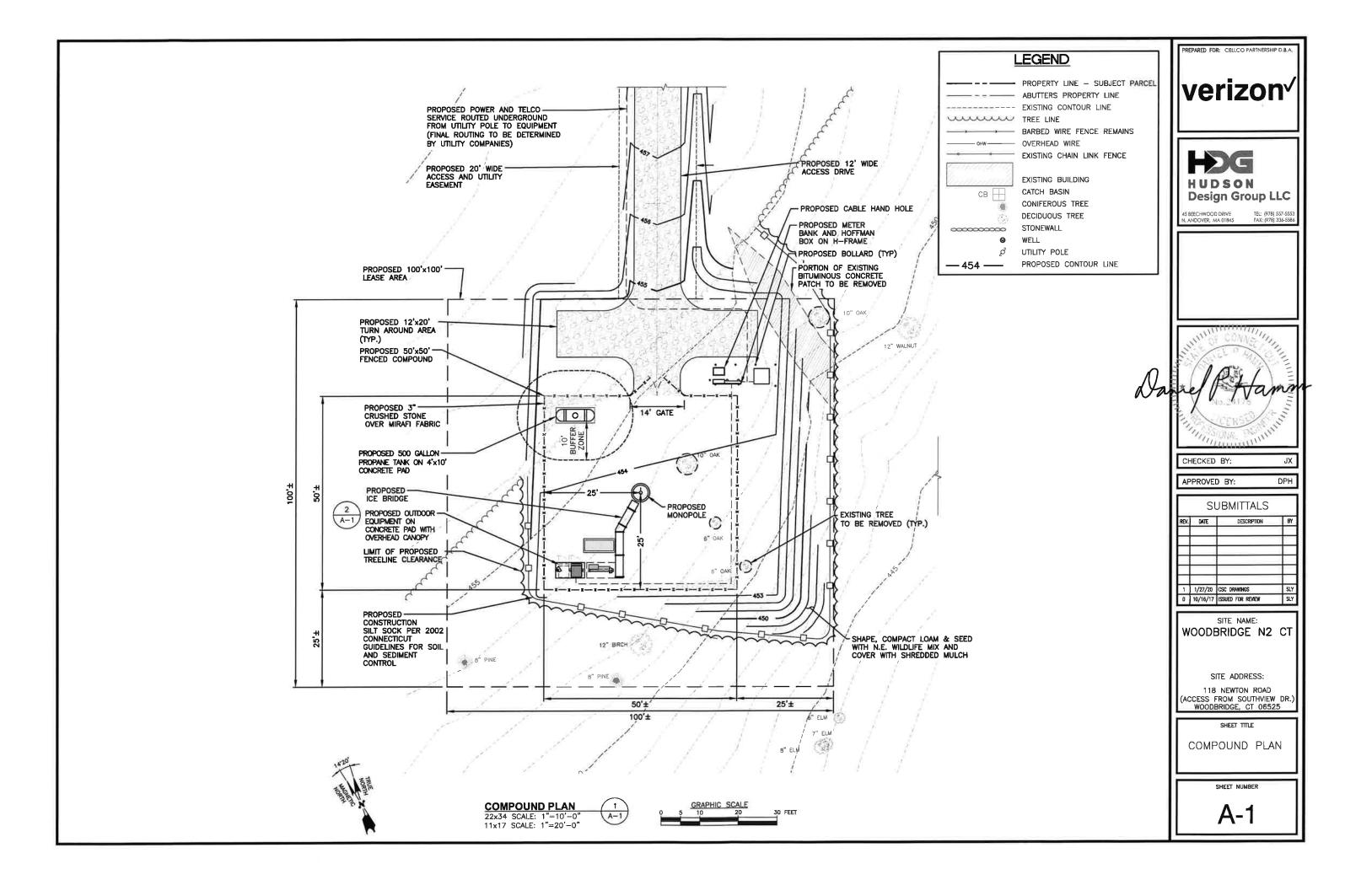
118 NEWTON ROAD ACCESS FROM SOUTHVIEW DR. WOODBRIDGE, CT 06525

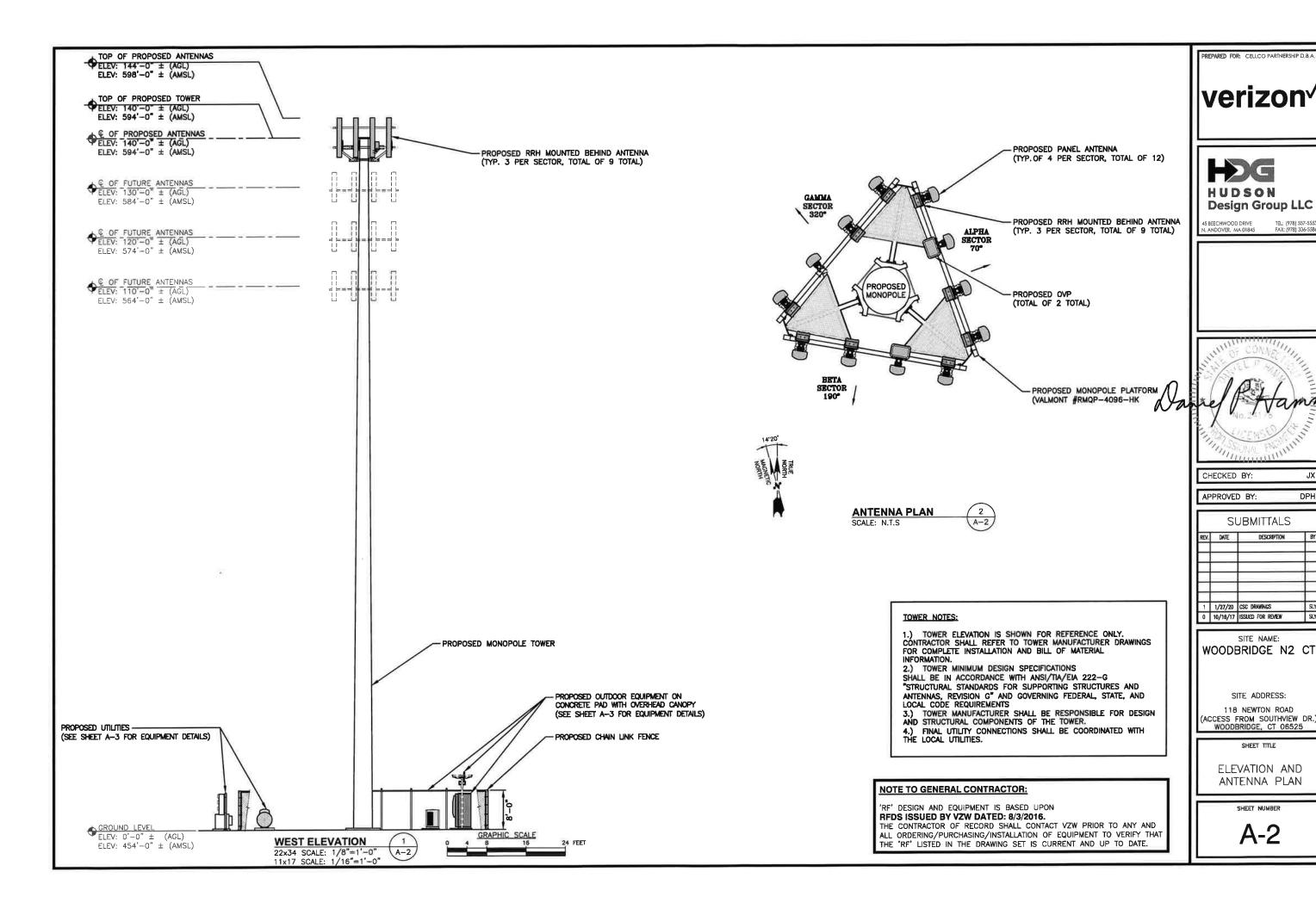
TITLE SHEET

SHEET NUMBER



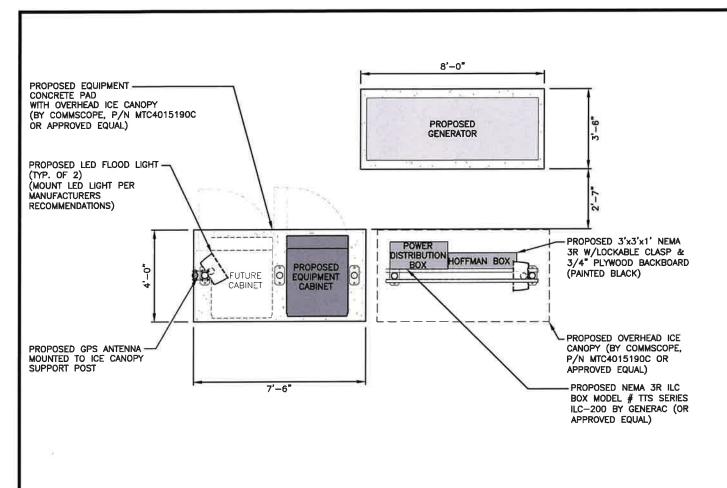


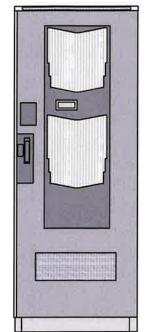




JX

DPH

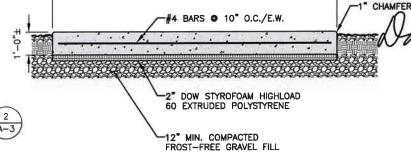




ANCHOR CABINET TO CONCRETE PAD PER MANUFACTURERS RECOMMENDATIONS

SPECIFICATIONS: MANUFACTURER: COMMSCOPE PART NO.: 760237152-RBA84-32 SIZE: 85.5"x32"42.1" WEIGHT: 1875-1955 LBS

EQUIPMENT CABINET DETAIL SCALE: N.T.S



FOUNDATION NOTES & CONCRETE SPECIFICATIONS:

MINIMUM, TO PROVIDE UNYIELDING SURFACE.

4. REINFORCING BAR TO BE ASTM A615 GRADE 60.

TO BE 6% (PLUS OR MINUS 2%)

SPECIFICATIONS.

1. FOUNDATION AREA SHALL BE EXCAVATED TO THE DEPTH AND DIMENSIONS SHOWN ON THE PLANS. EXISTING LEDGE AND ALL OTHER EXISTING

2. UNDERCUT SOFT OR "WEAVING" AREAS A MINIMUM OF 12 INCHES DEEP,

3. CONCRETE TO HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH

6. ALL REINFORCING TO HAVE MINIMUM CONCRETE COVER PER ACI

BACKFILL UNDERCUT AREA WITH FILL MEETING THE SPECIFICATIONS OF STRUCTURAL FILL.

(f'c)=4000 psi. CONCRETE TO BE AIR ENTRAINED, DESIRED AIR CONTENT

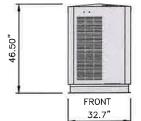
5. WELDED WIRE FABRIC TO CONFORM TO THE REQUIREMENTS OF ASTM A185. WIRES FOR FABRIC TO CONFORM TO THE REQUIREMENTS OF ASTM A82.

7. ALL CONCRETE MATERIALS AND WORKMANSHIP SHALL CONFORM TO LATEST EDITION OF ACI 318 AND APPLICABLE STATE BUILDING CODE.

SEE PLAN

UNSUITABLE MATERIAL SHALL BE REMOVED AND LEGALLY DISPOSED OF OFF-SITE. THE SUBGRADE SHALL BE ROLLED WITH A 1-TON, VIBRATORY, WALK-BEHIND ROLLER AT A SPEED OF LESS THAN 2 FPS, 6 PASSES

CONCRETE PAD DETAIL 22x34 SCALE: N.T.S

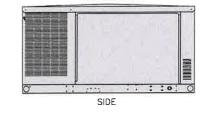




PLAN

EQUIPMENT PLAN

SCALE: N.T.S



GENERATOR
KOHLER 30CCL
30kW LP GAS GENERATOR
5-11 H20 421 ft3/h
STEEL: 1,432 lbs.



COOPER LIGHTING NFFLD NIGHT FALCON NFFLD-A25-E-UNV-66-S-BK SLIPFITTER MOUNT AND VANDAL SHIELD

MOUNT PER MANUFACTURER'S SPECIFICATIONS.



INTERMATIC WP1220C

DOUBLE GANG VERTICAL TYPF: HINGE: INSERT: WP217 DEPTH: 2-1/4" COLOR: CLEÁR

OR APPROVED EQUIVALENT



INTERMATIC FF6H

TIME CYCLE: 6 HOURS SWITCH: NO

OR APPROVED EQUIVALENT

NOTE:

CONTRACTOR SHALL NOT INSTALL ANY HARDWARE/EQUIPMENT IN AND AROUND ANY WORKING AREAS THAT CREATE A TRIP HAZARD. E.O.R. SHALL BE NOTIFIED IF ANY EXISTING HARDWARE/EQUIPMENT CREATES A TRIP HAZARD PRIOR TO INSTALLATION.

PREPARED FOR: CELLCO PARTNERSHIP D.B.

verizon



45 BEECHWOOD DRIVE N. ANDOVER. MA 01845

TEL: (978) 557-5553 FAX: (978) 336-5586



CHECKED BY

APPROVED BY:

DPH

SLY

SUBMITTALS REV. DATE DESCRIPTION 1 1/27/20 CSC DRAWINGS

SITE NAME: WOODBRIDGE N2 CT

0 10/16/17 ISSUED FOR REVIEW

SITE ADDRESS:

118 NEWTON ROAD (ACCESS FROM SOUTHVIEW DR. WOODBRIDGE, CT 06525

> **EQUIPMENT** CONCRETE PAD AND DETAILS

SHEET NUMBER

GENERATOR DETAIL SCALE: N.T.S

LED FLOOD LIGHT DETAIL SCALE: N.T.S







PRELIMINARY VISUAL ASSESSMENT

Date: April 30, 2020

To: Verizon Wireless

20 Alexander Drive Wallingford, CT 06492

From: Brian Gaudet, Project Manager

Re: Woodbridge N2 CT

Proposed Telecommunications Facility

118 Newton Road

Woodbridge, Connecticut

Cellco Partnership d/b/a Verizon Wireless ("Verizon") has identified a proposed location for development of a wireless telecommunications facility at 118 Newton Road in Woodbridge, Connecticut (the "Host Property"). The proposed Facility would include a 140-foot tall steel monopole with antennas extending to 144 feet above ground level and associated ground equipment located in a 50-foot by 50-foot fenced compound in the south-central portion of the Host Property (the "Site").

The Host Property is a ± 6.01 -acre parcel developed with a residence and multiple outbuildings. A paved drive extends westward from Newton Road onto the eastern portion of the Host Property and provides access to the residence and outbuildings. A gravel drive extends southward onto the northwestern portion of the Host Property from the cul-de-sac of Sound View Drive. The Host Property is located west of Newton Road and south of Sound View Drive in the northern portion of Woodbridge. Land use in the immediate vicinity consists primarily of residentially developed properties. Alice Newton Street Memorial Park is located approximately 2,000 feet southwest of the Site and Amity High School is located approximately 3,500 feet south of the Site.

At the request of Verizon, All-Points Technology Corporation, P.C. ("APT") has prepared initial viewshed mapping to provide a preliminary evaluation of the visibility associated with the proposed Facility. To conduct this assessment, a predictive computer model was developed specifically for this project using ESRI's ArcMap Geographic Information System ("GIS")¹ software and available GIS data. The predictive model provides an initial estimate of potential visibility throughout a pre-defined Study Area, in this case a two-mile radius surrounding the proposed Facility location. The predictive model incorporates Project and Study Area-specific data, including the Facility location, its ground elevation and the proposed Facility height, as well as the surrounding topography, existing vegetation, and structures (the primary features that can block direct lines of sight). The Study Area primarily covers the Town of Woodbridge, but also includes small portions of the

¹ ArcMap is a Geographic Information System desktop application developed by the Environmental Systems Research Institute for creating maps, performing spatial analysis, and managing geographic data.

neighboring municipalities of Ansonia and Seymour (to the west), Bethany (to the north), and Hamden (to the east).

A digital surface model ("DSM"), capturing both the natural and built features on the Earth's surface, was generated for the extent of the Study Area utilizing State of Connecticut 2016 LiDAR² LAS³ data points. LiDAR is a remote-sensing technology that develops elevation data by measuring the time it takes for laser light to return from the surface to the instrument's sensors. The varying reflectivity of objects also means that the "returns" can be classified based on the characteristics of the reflected light, normally into categories such as "bare earth," "vegetation," "road," or "building". Derived from the 2016 LiDAR data, the LAS datasets contain the corresponding elevation point data and return classification values. The Study Area DSM incorporates the first return LAS dataset values that are associated with the highest feature in the landscape, typically a treetop, top of a building, and/or the highest point of other tall structures.

Once the DSM was generated, ESRI's Viewshed Tool was utilized to identify locations within the Study Area where the proposed Facility may be visible. ESRI's Viewshed Tool predicts visibility by identifying those cells⁴ within the DSM that can be seen from an observer location. Cells where visibility was indicated were extracted and converted from a raster dataset to a polygon feature which was then overlaid onto an aerial photograph and topographic base map. Since the DSM includes the highest relative feature in the landscape, isolated "visible" cells are often indicated within heavily forested areas (e.g., from the top of the highest tree) or on building rooftops during the initial processing. It is recognized that these areas do not represent typical viewer locations and overstate visibility. As such, the resulting polygon feature is further refined by extracting those areas. The viewshed results are also cross-checked against the most current aerial photographs to assess whether significant changes (a new housing development, for example) have occurred since the time the LiDAR-based LAS datasets were captured.

The results of the preliminary analysis are intended to provide a representation of those areas where portions of the Facility may potentially be visible to the human eye without the aid of magnification, based on a viewer eye-height of five (5) feet above the ground and the combination of intervening topography, trees and other vegetation, and structures. However, the Facility may not necessarily be visible from all locations within those areas identified by the predictive model, which has limitations. For instance, it is important to note that the computer model cannot account for mass density, tree diameters and branching variability of trees, or the degradation of views that occurs with distance. As a result, some areas depicted on the viewshed maps as theoretically offering potential visibility of the Facility may be over-predicted because the quality of those views is not sufficient for the human eye to recognize the Facility or discriminate it from other surrounding or intervening objects.

The preliminary viewshed mapping results indicate that predicted year-round visibility associated with the proposed Facility could include up to approximately 18 acres (<1% of the 8,042-acre Study Area). The majority of the predicted year-round visibility would be within approximately 800 feet to the west, north and east of the Facility. Additional year-round visibility may be experienced at distances of more than one mile away over open fields to the northeast and southeast.

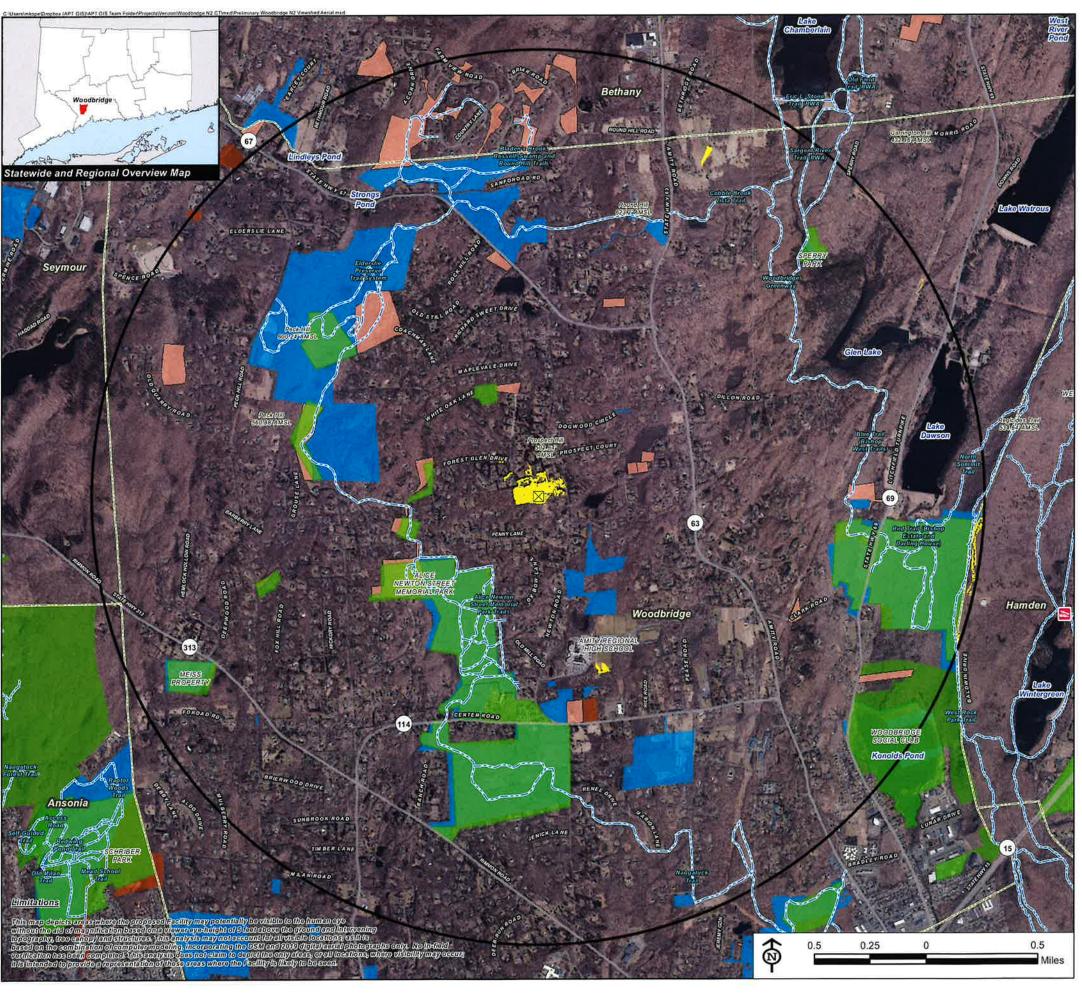
² Light Detection and Ranging

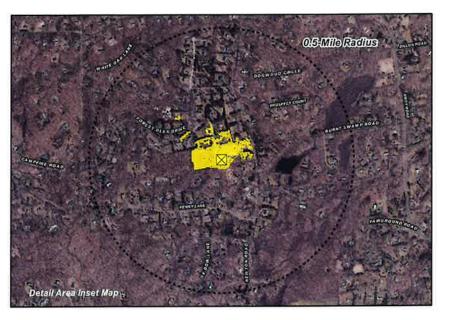
³ An LAS file is an industry-standard binary format for storing airborne LiDAR data,

⁴ Each DSM cell size is 1 square meter.

The maps provided as attachments offer a preliminary basis for understanding the extent of visibility that may occur throughout the Study Area, but they do not address the character of those potential views. Note that the results of the computer model have not been field verified. Our experience is that the computer model's sensitivity typically results in the initial mapping being over-predictive of the Facility's viewshed.

The initial results presented herein will be field-verified in the future via a balloon float or crane test and reconnaissance to supplement and fine tune the results of the preliminary computer modeling. The reconnaissance activities will consist of raising a brightly-colored, approximately four-foot diameter, helium-filled balloon or brightly-colored flag tethered at the proposed monopole height at the Site. Once the balloon/flag is raised into position, APT will perform a Study Area reconnaissance by driving publicly-accessible local and State roads and inventorying those locations where the balloon/flag is seen above/through the trees. Visual observations will be used to evaluate the results of the preliminary viewshed mapping and identify any discrepancies in the initial modeling. APT will also photo-document areas where the balloon/flag can be seen (as well as locations where it is not visible) and will prepare photographic simulations from several vantage points where the balloon/flag can be seen to depict scaled renderings of the proposed Facility. This information will be included in Verizon's application to the Connecticut Siting Council for a Certificate of Environmental Compatibility and Public Need.





Preliminary Viewshed Analysis Map

Proposed Wireless Telecommunications Facility Woodbridge N2 CT 118 Newton Road Woodbridge, Connecticut

Proposed facility height is 144 feet AGL. Forest canopy height is derived from LiDAR data. Study area encompasses a two-mile radius and includes 8,042 acres. Information provided on this map has not been field verified Base Map Source: 2019 Aerial Photograph (CTECO) Map Date: April 2020

Legend

Proposed Site Study Area (2-Mile Radius) Scenic Highway Predicted Year-Round Visibility (18 Acres) DEEP Boat Launches Municipal Boundary Municipal and Private Open Space Property State Forest/Park Protected Open Space Property Federal Land Trust Private State

Physical Geography / Background Data

A digital surface model (DSM) was created from the State of Connecticut 2016 LiDAR LAS data points. The DSM captures the natural and built features on the Earth's surface.

Municipal Open Space, State Recreation Areas, Trails, County Recreation Areas, and Town Boundary data obtained from CT DEEP, Scenic Roads: CTDOT State Scenic Highways (2015); Municipal Scenic Roads (compiled by APT)

Dedicated Open Space & Recreation Areas

Connecticut Department of Energy and Environmental Protection (DEEP): DEEP Property (May 2007; Federal Open Space (1997); Municipal and Private Open Space (1997); DEEP Boat Launches (1994)

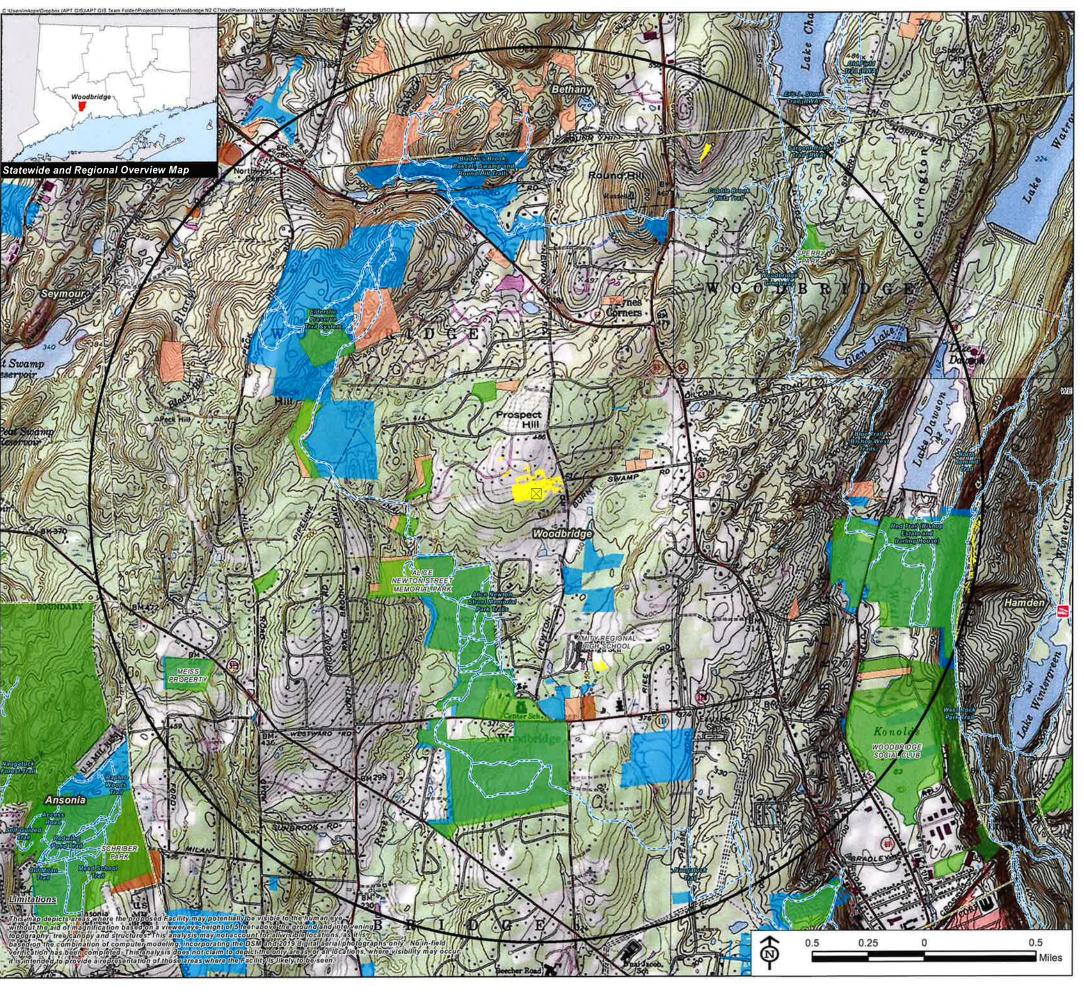
Connecticut Forest & Parks Association, Connecticut Walk Books East & West

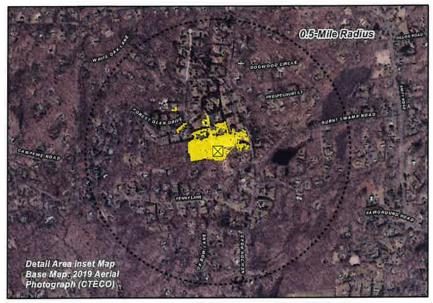
Other
CTDOT Scenic Strips (based on Department of Transportation data)

**Not all the sources listed above appear on the Viewshed Maps. Only those features within the scale of the graphic are shown.

verizon/







Preliminary Viewshed Analysis Map

Proposed Wireless Telecommunications Facility
Woodbridge N2 CT
118 Newton Road
Woodbridge, Connecticut

Proposed facility height is 144 feet AGL.
Forest canopy height is derived from LiDAR data,
Study area encompasses a two-mile radius and includes 8,042 acres,
Information provided on this map has not been field verified
Base Map Source: USGS 7.5 Minute Topographic Quadrangle Maps,
Ansonia, CT (1984), Mount Carmel, CT (1984), Naugatuck, CT (1984) and
New Haven, CT (1984)
Map Date: April 2020

Data Sources:

Physical Geography / Background Data

A digital surface model (DSM) was created from the State of Connecticut 2016 LiDAR LAS data points, The DSM captures the natural and built features on the Earth's surface,

Municipal Open Space, State Recreation Areas, Trails, County Recreation Areas, and Town Boundary data obtained from CT DEEP, Scenic Roads: CTDOT State Scenic Highways (2015); Municipal Scenic Roads (compiled by APT)

Dedicated Open Space & Recreation Areas

Connecticut Department of Energy and Environmental Protection (DEEP): DEEP Property (May 2007; Federal Open Space (1997); Municipal and Private Open Space (1997); DEEP Boat Launches (1994)

Connecticut Forest & Parks Association, Connecticut Walk Books East & West

Other

CTDOT Scenic Strips (based on Department of Transportation data)

Notes

*Not all the sources listed above appear on the Viewshed Maps. Only those features within the





Site Name: Woodbridge North 2 CT Cumulative Power Density

Operator	Operating Number Frequency of Trans.	Number of Trans.	ERP Per Trans.	Total	Distance to Target	Calculated Power Density	Maximum Permissible Exposure*	Fraction of MPE
	(MHz)		(watts)	(watts)	(feet)	(mW/cm^2)	(mW/cm^2)	(%)
VZW 700	746	4	807	3,227	140	0.0592	0.49733333	11.90%
VZW Cellular	880	4	449	1,795	140	0.0329	0.586666667	5.61%
VZW PCS	1970	4	1,681	6,724	140	0.1234	1.0	12.34%
VZW AWS	2145	4	1,700	6,799	140	0.1248	1.0	12.48%
VZW CBRS	3550	4	9	25	140	0.0005	1.0	0.05%
Total Dozoontag	N to one the	a mix	of Maximum Dormicciblo Exposure	Plo Eva	Cillo			10 280/

Total Percentage of Maximum Permissible Exposure

*Guidelines adopted by the FCC on August 1, 1996, 47 CFR Section 1.13101 based on NCRP Report 86, 1986 and generally on ANSI/IEEE C95.1-1992

MHz = Megahertz

mW/cm^2 = milliwatts per square centimeter

ERP = Effective Radiated Power

Absolute worst case maximum values used, including the following assumptions:

- 1. closest accessible point is distance from antenna to base of pole;
- 2. continuous transmission from all available channels at full power for indefinite time period; and,
- 3. all RF energy is assumed to be directed solely to the base of the pole.

Cellco Partnership d/b/a Verizon Wireless 118 Newton Road Woodbridge, Connecticut

Woodbridge North 2 Facility

Site Search Summary

Section 16-50j-74(j) of the Regulations of Connecticut State Agencies requires the submission of a statement that describes "the narrowing process by which other possible sites were considered and eliminated." In accordance with this requirement, descriptions of the general site search process, the identification of the applicable search area and the alternative locations considered for development of the proposed telecommunications facility in north-central Woodbridge are provided below.

Site Search Process

To initiate its site selection process in an area where wireless service problems have been identified, Cellco first establishes a "site search ring" or "site search area". In any search ring or search area, Cellco seeks to avoid the unnecessary proliferation of towers and to reduce the potential adverse environmental effects of the cell site, while at the same time maximizing the quality of service provided from a facility. These objectives are achieved by initially locating existing towers and other sufficiently tall structures within and near the site search area. If any are found, they are evaluated to determine whether they can support Cellco's telecommunications antennas and related equipment at a location and satisfies its technical requirements.

The list of available locations may be further reduced if, after preliminary negotiations, the property owners withdraw a site from further consideration. From among the remaining locations, the proposed sites are selected by eliminating those that have greater potential for adverse environmental effects and fewer benefits to the public (i.e., those requiring taller towers; those with substantial adverse environmental impacts, or in densely populated residential areas; and those with limited ability to share space with other public or private telecommunications service providers). It should be noted that in any given site search, the weight afforded to factors considered in the selection process will vary depending upon the availability and nature of sites within the search area.

Need for the Woodbridge North 2 Facility

Within approximately four (4) miles of the proposed Woodbridge North 2 Facility, Cellco maintains eight (8) macro-cell and three (3) small cell telecommunications facilities. These facilities are identified as Cellco's Ansonia East, Bethany, Hamden Relo, Westville, Westville West, Woodbridge East, Woodbridge North, Woodbridge South 2, Hamden SC9, Hamden SC10, Hamden SC12 cell sites.

Cellco's Ansonia East facility consists of antennas on a tower at 1 Deerfield Lane in Ansonia. Cellco's Bethany facility consists of antennas on a tower at 93 Old Amity Road in Bethany. Cellco's Hamden Relo facility consists of antennas on a tower at 796 Woodin Street in Hamden. Cellco's Westville facility consists of antennas on a rooftop at 1015 Whalley Avenue in New Haven. Cellco's Westville West facility consists of antennas on a tower at 50 Woodfield Road in Woodbridge. Cellco's Woodbridge East facility consists of antennas on a flagpole tower at 100 Pond Lily Avenue in New Haven. Cellco's Woodbridge North facility consists of antennas on a tower at 6 Progress Avenue in Seymour. Cellco's Woodbridge South 2 facility consists of antennas on a tower at 77 Pease Road in Woodbridge. Cellco's Hamden SC9 facility consists of antennas on a utility pole near 465 Pine Rock Avenue in Hamden. Cellco's Hamden SC10 facility consists of antennas on a utility pole near 667 Pine Rock Avenue in Hamden. Cellco's Hamden SC12 facility consists of antennas on a utility pole near 546 Circular Avenue in Hamden.

These existing facilities currently provide little or no reliable wireless service in the area around the proposed Woodbridge North 2 Facility location. These gaps in reliable wireless service and signal level deficiencies persist along portions of Route 63, 67 and 114 and more generally in the residential areas of north-central Woodbridge. Unfortunately, there are no other existing towers or other sufficiently tall structures available in this area that would help Cellco satisfy its need for service and reliability improvements. Construction of a new tower, therefore, is required to resolve Cellco's wireless service problems.

Identification of the Woodbridge North 2 Search Area

The purpose of the proposed Woodbridge North 2 Facility is to fill existing wireless service gaps in Cellco's 2100 MHz frequency range and provide more reliable wireless service in Cellco's 700 MHz frequency range in north-central Woodbridge. (*See* attached Search Area Map). The Woodbridge North 2 site search was initiated in 2014. The project was put on hold in 2015 but the site search was re-initiated in 2016 following a shift in the search area location by Cellco's RF Engineers.

Sites Investigated

Cellco identified and investigated a total of seven (7) sites in north-central Woodbridge. A listing of the sites investigated is provided below.

- 1. <u>118 Newton Road, Woodbridge, CT (MBL# 1304/1240/118)</u>: Cellco entered into a lease agreement with Michael Soufrine Trustee of the Soufrine Family Trust, for the development of a new tower site on this 6.01-acre parcel in the Town's A Residence zone district.
- 2. <u>19 Soundview Drive, Woodbridge, CT (MBL# 1304/1740/19)</u>: This is an 8.2-acre residential parcel owned by Jay Michael Soufrine located immediately west of the proposed tower site.
- 3. <u>30 Sperry Road, Woodbridge, CT (MBL# 0904/1760/30)</u>: This is an undeveloped 117-acre parcel, west off Sperry Road, owned by the South-Central Connecticut Regional Water Authority.

- 4. <u>615 Amity Road, Woodbridge, CT (MBL# 0403/30/615)</u>: This is an undeveloped 199-acre parcel east of Amity Road and west of Sperry Road and owned by the South-Central Connecticut Regional Water Authority.
- 5. **2060 Litchfield Turnpike, Woodbridge, CT (MBL# 1002/1000/2060):** This is an undeveloped 435-acre parcel east of Litchfield Turnpike and east of Sperry Road and owned by the South-Central Connecticut Regional Water Authority.

In addition to the privately-owned parcels listed above, Cellco's real estate representatives identified two (2) additional parcels, both owned by the Town of Woodbridge as potentially viable alternative tower locations. Through this municipal consultation process, Cellco would like to explore whether the Town is interested in leasing space on either of these parcels for the development of a telecommunication facility. These municipal parcels include:

- 6. 46 Burnt Swamp Road, Woodbridge, CT (MBL# 1403/260/46): This is a 3.87-acre parcel owned by the Town of Woodbridge. The parcel contains significant wetland areas associated with the Wepawaug River in the southerly portion of this parcel.
- 7. <u>7 Meeting House Road, Woodbridge, CT (MBL# 1704/1115/7)</u>: This is a vacant 103.34-acre parcel owned by the Woodbridge Park Association, Inc.



Legend



Search Area Map

Proposed Wireless Telecommunications Facility Woodbridge N2 CT 118 Newton Road Woodbridge, Connecticut

verizon/

ALL-POINTS TECHNOLOGY CORPORATION



Legend

Site Investigated

Approximate Parcel Boundary

Municipal Boundary

Sites Investigated:

1 118 Newton Road, Woodbridge, CT

2 19 Soundview Drive, Woodbridge, CT

3 30 Sperry Road, Woodbridge, CT

4 615 Amity Road, Woodbridge, CT

5 2060 Litchfield Turnpike, Woodbridge, CT

6 46 Burnt Swamp Road, Woodbridge, CT

7 Meeting House Road, Woodbridge, CT

Site Search Summary Map

Proposed Wireless Telecommunications Facility Woodbridge N2 CT 118 Newton Road Woodbridge, Connecticut

